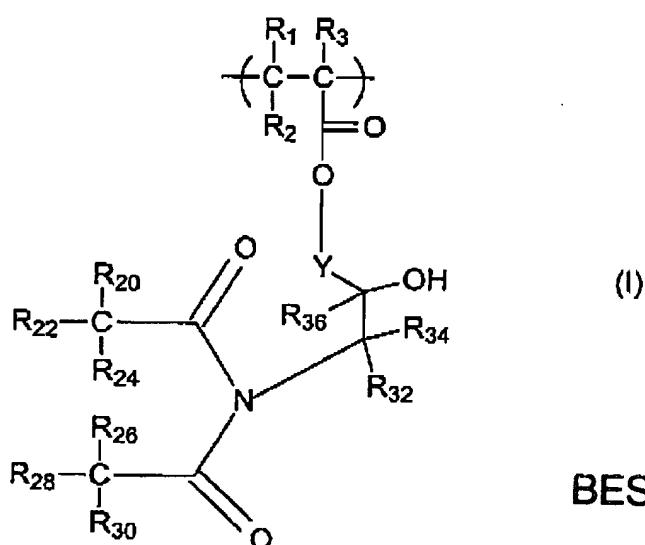


Serial No. 10/721,883  
Filed: November 26, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (amended) A polymer comprising at least one repeating unit represented by formula (I)



**BEST AVAILABLE COPY**

where  $R_1$ ,  $R_2$ , and  $R_3$  are each independently selected from hydrogen or alkyl;  $R_{20}$ ,  $R_{22}$ ,  $R_{24}$ ,  $R_{26}$ ,  $R_{28}$ , and  $R_{30}$  are independently selected from hydrogen, alkyl, aryl, aralkyl, or 5-, 6-, or 7-membered heterocyclic ring containing at least one heteroatom selected from nitrogen, oxygen or sulfur, or  $R_{24}$  and  $R_{26}$  taken together form  $(CH_2)_{n1}(O)_{n2}(CH_2)_{n3}$  where  $n_2$  is 0 or 1 and  $n_1+n_2+n_3 = 1$  to 5;  $R_{32}$ ,  $R_{34}$ , and  $R_{36}$  are independently selected from hydrogen, alkyl, aryl, aralkyl, or 5-, 6-, or 7-membered heterocyclic ring containing at least one heteroatom selected from nitrogen, oxygen or sulfur; and  $Y$  is selected from linear or branched alkylene, monocyclic or polycyclic alkylene, arylene, aralkylene, polyoxyalkylene, linear or branched alkenylene, monocyclic or polycyclic alkenylene, aromatic or non-aromatic heterocyclic diradical and alicyclic diradical groups, the alkyl,

Serial No. 10/721,883  
Filed: November 26, 2003

aryl, aralkyl, heterocyclic ring, carbocyclic ring, linear or branched alkylene, monocyclic or polycyclic alkylene, arylene, aralkylene, polyoxyalkylene, linear or branched alkenylene, monocyclic or polycyclic alkenylene, aromatic or non-aromatic heterocyclic diradical and alicyclic diradical being unsubstituted or substituted.

2. (original) The polymer of claim 1 which further comprises an additional monomer.
3. (original) The polymer of claim 2 wherein the additional monomer is selected from optionally substituted acrylic esters, optionally substituted acrylic acids, optionally substituted methacrylic esters, optionally substituted methacrylic acids, optionally substituted acrylamides, optionally substituted methacrylamides, optionally substituted allyl compounds, optionally substituted styrenes, optionally substituted hydroxystyrene, optionally substituted hydroxyisopropylstyrene, optionally substituted methylstyrene, optionally substituted hydroxymethylstyrene, optionally substituted hydroxyl- $\alpha$ -methylstyrene, optionally substituted vinyl ethers, optionally substituted vinyl esters, optionally substituted crotonic acids, optionally substituted crotonic acid esters, optionally substituted maleic anhydride, optionally substituted dialkyl itaconates, optionally substituted monoalkyl or dialkyl esters of maleic acid or fumaric acid, and mixtures thereof.
4. (original) The polymer of claim 3 wherein the additional monomer is selected from optionally substituted methacrylic esters and optionally substituted styrenes.
5. (original) The polymer of claim 4 wherein the methacrylic esters contains a pendent hydroxyl group.
6. (canceled)

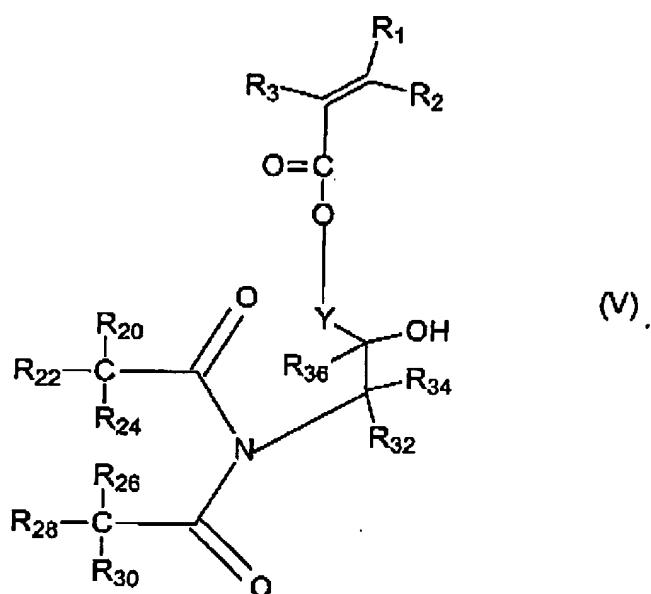
Serial No. 10/721,883  
Filed: November 26, 2003

7. (previously presented) The polymer of claim 1 wherein Y is linear or branched alkylene.

8. (previously presented) The polymer of claim 7 wherein each of R<sub>32</sub>, R<sub>34</sub>, and R<sub>36</sub> are independently hydrogen.

Claims 9 to 12 canceled.

13. (amended) A compound having the formula



where R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> are each independently selected from hydrogen or alkyl; R<sub>20</sub>, R<sub>22</sub>, R<sub>24</sub>, R<sub>26</sub>, R<sub>28</sub>, and R<sub>30</sub> are independently selected from hydrogen, alkyl, aryl, aralkyl, or 5-, 6-, or 7-membered heterocyclic ring containing at least one heteroatom selected from nitrogen, oxygen or sulfur, or R<sub>24</sub> and R<sub>26</sub> taken together form  $-\text{(\text{CH}_2)}_{n1}(\text{O})_{n2}(\text{CH}_2)_{n3}-$  where n<sub>2</sub> is 0 or 1 and n<sub>1</sub>+n<sub>2</sub>+n<sub>3</sub> = 1 to 5, or with the carbon atoms to which they are attached form a carbocyclic ring and R<sub>20</sub>, R<sub>22</sub>, R<sub>28</sub> and R<sub>30</sub> are as defined above; R<sub>32</sub>, R<sub>34</sub>,

Serial No. 10/721,883  
Filed: November 26, 2003

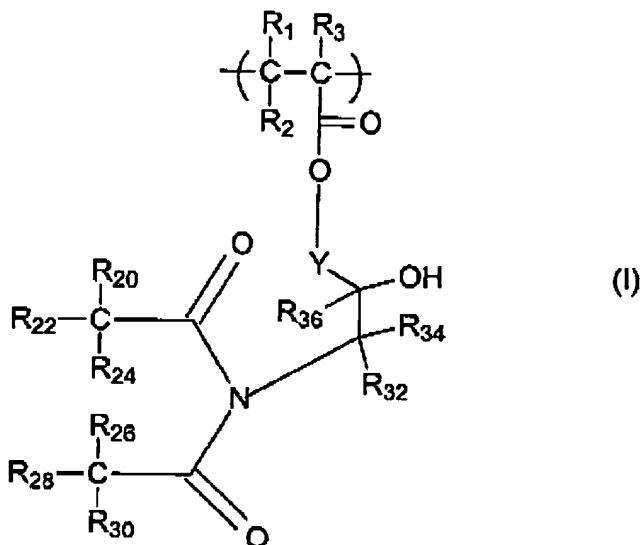
and  $R_{36}$  are independently selected from hydrogen, alkyl, aryl, aralkyl, or 5-, 6-, or 7-membered heterocyclic ring containing at least one heteroatom selected from nitrogen, oxygen or sulfur; and Y is selected from linear or branched alkylene, monocyclic or polycyclic alkylene, arylene, aralkylene, polyoxyalkylene, linear or branched alkenylene, monocyclic or polycyclic alkenylene, aromatic or non-aromatic heterocyclic diradical and alicyclic diradical groups, the alkyl, aryl, aralkyl, heterocyclic ring, ~~carbocyclic ring~~, linear or branched alkylene, monocyclic or polycyclic alkylene, arylene, aralkylene, polyoxyalkylene, linear or branched alkenylene, monocyclic or polycyclic alkenylene, aromatic or non-aromatic heterocyclic diradical and alicyclic diradical being unsubstituted or substituted.

14. (original) The compound of claim 13 wherein Y is linear or branched alkylene.
15. (original) The compound of claim 13 wherein each of  $R_{32}$ ,  $R_{34}$ , and  $R_{36}$  are independently hydrogen.

Claims 16 to 18 canceled.

19. (amended) An antireflective coating composition comprising:
  - a) a polymer comprising at least one repeating unit represented by formula (I)

Serial No. 10/721,883  
Filed: November 26, 2003



BEST AVAILABLE COPY

where  $R_1$ ,  $R_2$ , and  $R_3$  are each independently selected from hydrogen or alkyl;  $R_{20}$ ,  $R_{22}$ ,  $R_{24}$ ,  $R_{26}$ ,  $R_{28}$ , and  $R_{30}$  are independently selected from hydrogen, alkyl, aryl, aralkyl, or 5-, 6-, or 7-membered heterocyclic ring containing at least one heteroatom selected from nitrogen, oxygen or sulfur, or  $R_{24}$  and  $R_{26}$  taken together form  $-\text{CH}_2\text{}_n\text{O}\text{}_m\text{CH}_2\text{}_p-$  where  $n$  is 0 or 1 and  $n+1+m+p = 1$  to 5, or (iii) with the carbon atoms to which they are attached form a carbocyclic ring and  $R_{20}$ ,  $R_{22}$ ,  $R_{24}$  and  $R_{30}$  are as defined above;  $R_{32}$ ,  $R_{34}$ , and  $R_{36}$  are independently selected from hydrogen, alkyl, aryl, aralkyl, or 5-, 6-, or 7-membered heterocyclic ring containing at least one heteroatom selected from nitrogen, oxygen or sulfur; and  $Y$  is selected from linear or branched alkylene, monocyclic or polycyclic alkylene, arylene, aralkylene, polyoxyalkylene, linear or branched alkenylene, monocyclic or polycyclic alkenylene, aromatic or non-aromatic heterocyclic diradical and alicyclic diradical groups, the alkyl, aryl, aralkyl, heterocyclic ring, carbocyclic ring, linear or branched alkylene, monocyclic or polycyclic alkylene, arylene, aralkylene, polyoxyalkylene, linear or branched alkenylene, monocyclic or polycyclic alkenylene, aromatic or non-aromatic heterocyclic diradical and alicyclic diradical being unsubstituted or substituted; and

Serial No. 10/721,883  
Filed: November 26, 2003

b) at least one crosslinking agent.

20. (original) The composition of claim 19 wherein for a), the polymer further comprises an additional monomer.

21. (original) The composition of claim 20 wherein the additional monomer is selected from optionally substituted acrylic esters, optionally substituted acrylic acids, optionally substituted methacrylic esters, optionally substituted methacrylic acids, optionally substituted acrylamides, optionally substituted methacrylamides, optionally substituted allyl compounds, optionally substituted styrenes, optionally substituted hydroxystyrene, optionally substituted hydroxyisopropylstyrene, optionally substituted methylstyrene, optionally substituted hydroxymethylstyrene, optionally substituted hydroxyl- $\alpha$ -methylstyrene, optionally substituted vinyl ethers, optionally substituted vinyl esters, optionally substituted crotonic acids, optionally substituted crotonic acid esters, optionally substituted maleic anhydride, optionally substituted dialkyl itaconates, optionally substituted monoalkyl or dialkyl esters of maleic acid or fumaric acid, and mixtures thereof.

22. (original) The composition of claim 20 wherein the additional monomer is selected from optionally substituted methacrylates and optionally substituted styrenes.

23. (original) The composition of claim 22 wherein the methacrylic esters contains a pendent hydroxyl group.

24. (canceled)

25. (previously presented) The composition of claim 19 wherein for a), Y is linear or branched alkylene.

Serial No. 10/721,883  
Filed: November 26, 2003

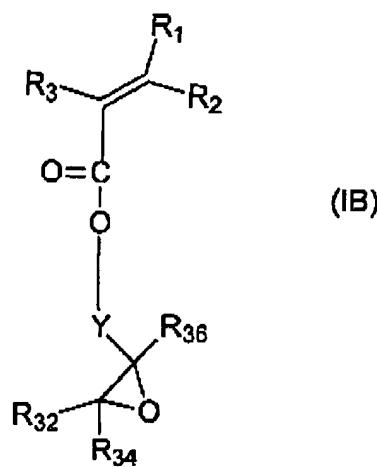
26. (previously presented) The composition of claim 19 wherein for a), each of  $R_{32}$ ,  $R_{34}$ , and  $R_{36}$  are independently hydrogen.

Claims 27 to 30 canceled.

31. (original) The composition of claim 19 wherein b) the crosslinking agent is selected from aminoplasts, isocyanates and mixtures thereof.

32. (original) The composition of claim 19 which further comprises at least one additional component selected from solvents, cross-linking catalysts, monomeric dyes, surface leveling agents, adhesion promoters, and antifoaming agents.

33. (amended) A method of making the compound of claim 13 comprising reacting a compound of formula (IB)

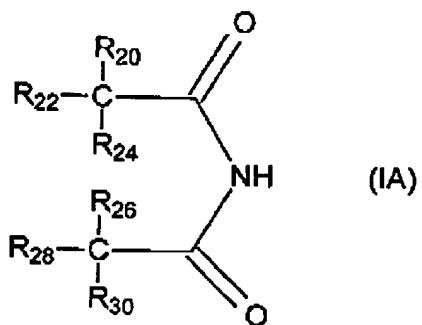


where  $R_1$ ,  $R_2$ , and  $R_3$  are each independently selected from hydrogen or alkyl;  $R_{32}$ ,  $R_{34}$ , and  $R_{36}$  are independently selected from hydrogen, alkyl, aryl, aralkyl, or 5-, 6-, or 7-membered heterocyclic ring containing at least one heteroatom selected from nitrogen,

Serial No. 10/721,883  
Filed: November 26, 2003

oxygen or sulfur; and Y is selected from linear or branched alkylene, monocyclic or polycyclic alkylene, arylene, aralkylene, polyoxyalkylene, linear or branched alkenylene, monocyclic or polycyclic alkenylene, aromatic or non-aromatic heterocyclic diradical and alicyclic diradical groups, the alkyl, aryl, aralkyl, heterocyclic ring, carbocyclic ring, linear or branched alkylene, monocyclic or polycyclic alkylene, arylene, aralkylene, polyoxyalkylene, linear or branched alkenylene, monocyclic or polycyclic alkenylene, aromatic or non-aromatic heterocyclic diradical and alicyclic diradical being unsubstituted or substituted,

with a compound of formula (IA)



where R<sub>20</sub>, R<sub>22</sub>, R<sub>24</sub>, R<sub>26</sub>, R<sub>28</sub>, and R<sub>30</sub> are independently selected from hydrogen, alkyl, aryl, aralkyl, or 5-, 6-, or 7-membered heterocyclic ring containing at least one heteroatom selected from nitrogen, oxygen or sulfur, or R<sub>24</sub> and R<sub>26</sub> taken together (i) form a direct bond, (ii) form  $(CH_2)_{n_1}(O)_{n_2}(CH_2)_{n_3}$  where n<sub>2</sub> is 0 or 1 and n<sub>1</sub>+n<sub>2</sub>+n<sub>3</sub> = 1 to 5, or (iii) with the carbon atoms to which they are attached form a carbocyclic ring and R<sub>20</sub>, R<sub>22</sub>, R<sub>28</sub> and R<sub>30</sub> are as defined above, the alkyl, aryl, aralkyl, and heterocyclic ring, and carbocyclic ring being unsubstituted or substituted,

in the presence of a catalyst and separating the compound of claim 13 from the reaction mixture.

Serial No. 10/721,883  
Filed: November 26, 2003

34. (original) The method of claim 33 wherein Y is linear or branched alkylene.
35. (original) The method of claim 33 wherein each of R<sub>32</sub>, R<sub>34</sub>, and R<sub>36</sub> are independently hydrogen.

Claims 36 to 51 (canceled)